

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

Experimental tests of the effects of OA on early life history of marine fishes

1.2. Summary description of the data:

These data characterize treatments and outcomes in laboratory-based ocean acidification experiments conducted at the NOAA NEFSC Howard Laboratory. Experiments vary by species used, scope of study (experiment duration and species' life-stages examined), and experimental design including number of treatments, levels, and replicates, and the suite of response variables. This experiment used summer flounder (*Paralichthys dentatus*) as subjects, one treatment (concentration of aqueous pCO₂), three treatment levels (775, 1808, and 4714 μ atm pCO₂, pHs of 7.8, 7.5, and 7.1, respectively), three replicates (replicated downstream from each unique CO₂ source), and the following response variables: survival of embryos to hatching and of larvae to age 28 d post-hatching; size, shape, and image-based developmental features of larvae; and histopathologically determined status of key organs (eye, heart, liver, gall bladder, gastro-intestinal tract, epidermis, kidney, spinal cord, and muscles) and cranio-facial and skeletal elements.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2010 to 2014

1.5. Actual or planned geographic coverage of the data:

New Jersey, USA coastal waters (source of adults used to produce the offspring used in these experiments)

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Table (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy,

research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

Instrument: not applicable

Platform: not applicable

Physical Collection / Fishing Gear: not applicable

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

Robert Christopher Chambers

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

chris.chambers@noaa.gov

2.5. Phone number:

732-872-3075

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

Robert Christopher Chambers

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

Yes

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

Data were collected by pre-planned design and varied with experiment. Data on embryo deaths and hatchlings were collected at a daily frequency; size and shape data of hatchlings (Nmax = 10 per replicate) were collected from the interquartile range of the hatch frequency distribution once hatching commenced; mortality of larvae was checked daily; larvae were sampled for image-based size and shape every 7 days through 28 days post-hatching. Data from images were scored via image analysis software (Image Tool v.3). Histopathology data were collected from preserved larvae (staining sequence in Chambers et al. 2014 *ibid.*). All data were entered into Excel spreadsheets.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

All entered data were check for correspondence to original hand-written data sheets (where used). Data were inspected for statistical outliers via frequency plots and scatterplots. Some data were given subjective quality codes, e.g., based on quality / clarity of image used as the source of image-extraction software.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/27478>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

Yes

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

<ftp://ftp.nefsc.noaa.gov/pub/dropoff/PARR/EAD/FEB/27478/>

7.3. Data access methods or services offered:

NEFSC Data Access Procedure:

1. Formal request in writing usually to the data owner/contact or Center Director;
2. Requester is contacted by data owner to review and verify the request content and details for data delivery options.
3. If data are confidential then owner will determine if the data may be released to the requester;
4. If data can be released, the data are downloaded and packaged for delivery

electronically; or the requester may be directed to where the data is available online.

7.4. Approximate delay between data collection and dissemination:

none

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

OTHER

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

NEFSC James J. Howard Lab - Highlands, NJ

8.3. Approximate delay between data collection and submission to an archive facility:

Unknown

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

Archival of source data preserving unaltered collected data, Scheduled backups, Remote storage backups, Password protection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.